

# Bio-Seeq PCR Bio Agent Detector

smiths

Smiths Detection

Date Revised: 25 NOV 03

## VENDOR DESCRIPTION

The Bio-Seeq Handheld PCR system is the first commercially-available handheld nucleic acid analyzer. It was engineered by Smiths Detection and incorporates several advanced features, including an integrated battery pack, automatic calibration, enhanced reliability, and improved ergonomics. The Bio-Seeq allows personnel with minimal training to perform PCR assays in the field in approximately 30 minutes. The Bio-Seeq system consists of two components: A handheld instrument and a consumable cartridge. The instrument is a battery-operated device that is designed for use with minimal training. The consumable cartridge automatically performs the sample preparation steps (including filtering of PCR inhibitors and addition of reagents) normally performed by laboratory personnel prior to adding the sample to the instrument.



### Product Manager Robotic & Unmanned Sensors

Telephone: (732) 427-5827 / DSN 987

Fax: (732) 427-5072 / DSN 987

e-mail: SFAE-IEWS-NV-RUS@IEWS.monmouth.army.mil



Business Category: Large Business

BAD

## Hardware

|   |   |
|---|---|
| Power: External 12VDC, internal batteries, vehicle power            | Operating Altitude: 0 ft to 15,000 ft AGL           |
| Weight: 6.5 lbs including commercial batteries                      | Operating Temp.: 5°C to 32°C                        |
| Dimensions: 11" x 3.5" x 7"   | Storage Temp.: -30°C to 70°C                        |
| Internal Volume: < .2 ft <sup>3</sup>                               | Interface: RS-232E, compatible with ACMS RF systems |
| Sensor Type: Polymerase Chain Reaction (PCR) Thermocycler           | Bandwidth Required: 18200 baud                      |
| Test Capacity: Up to six tests simultaneously                       | TCDL Compatibility: No                              |
| Typical Test Time: 30 minutes                                       | MTBOMF: > 500 hrs (est.)                            |
| Operating Time: 2 hours on internal commercial batteries            | MTTR: .2 hrs (est.)                                 |
| Internal Permanent Archive on Information: Yes (512 tests capacity) |   |

## Performance

|  |
|--|
| Completes 95% (est.) of the Missions it states w/out experiencing a mission abort              |
| Sensor hardened to mitigate damaging effect from EMP: No                                       |
| Sensor hardened to eliminate damaging effect from EMP: No                                      |
| Capability to detect all biological threats, except toxins, in liquids, powder, or rain        |
| Minimum Level of Detection: 100 CFUs/reaction tube 1000-5000 spores with sample collect device |
| Quantification: Semi-quantitative  |